

**REMARKS****Specification:**

The Examiner objected to the Specification, stating that it should be amended to recite the US Patent Number of the parent application. The Specification has been so amended.

**In the Claims:**

Claims 27-38 remain in this application. New claims 32-38 have been added.

**Rejections Under 35 U.S.C. 103(a):**

Claims 27-31 were rejected under 35 U.S.C. 103(a) as being unpatentable over Visokay et al. (U.S. Pub. 2003/0045080) (hereinafter "Visokay") in view of Boyd et al. (U.S. 6,845,778) (hereinafter "Boyd").

The rejection of claim 27 should be withdrawn because there is no suggestion or motivation to combine the cited references to result in the method recited in claim 27. A proper prima facie rejection under 35 U.S.C. 103(a) requires a suggestion or motivation within the cited prior art or within the knowledge generally available to one of ordinary skill in the art to combine references or modify a reference (MPEP 706.02(j), 2143; *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)).

Because Boyd does not contain any suggestion to combine megasonic cleaning with the solution of Visokay to remove impurities from the high-k gate dielectric layer, the rejection should be withdrawn. The megasonic cleaning of Boyd is used to remove **particles from the surface of a substrate** (Boyd, col. 1, lines 6-31). There is no indication in Visokay that particles on the surface of a substrate are a problem, so one of skill in the art would not be motivated to use the megasonic cleaning of Boyd in combination with Visokay. Nor is

there any indication that the process used by Boyd to remove particles from the surface of a substrate would also be useful for removing impurities from a high-k dielectric layer, as is recited in claim 27. An example of such impurities is found on page 5, lines 16-18 of the Specification, which states that when a metal chloride precursor is used to form a high-k gate dielectric layer, chlorine may permeate through that high-k dielectric layer. Chlorine permeating through a high-k dielectric layer is not the same as a particle on a substrate. As Boyd is concerned with cleaning particles from a substrate and is not concerned with removing impurities from a high-k dielectric layer, one of skill in the art would not be motivated to combine Boyd with Visokay to result in the method recited in claim 27.

Claims 28-31 depend from claim 27. The rejections of claims 28-31 are based upon the Examiner's rejection of claim 27. Since the rejection of claim 27 is improper and should be withdrawn, the rejections of claims 28-31 should also be withdrawn.

Respectfully submitted,

Date: September 29, 2005



Michael D. Plimier  
Reg. No. 43,004  
ATTORNEY FOR APPLICANTS

Intel Corporation  
Mail Stop SC4-202  
P.O. Box 5326  
Santa Clara, CA 95056-5326  
(408) 765-7857

CERTIFICATE OF TRANSMISSION  
(37 C.F.R. § 1.8(a))

I hereby certify that this correspondence is being transmitted by facsimile to the United States Patent and Trademark Office on September 29, 2005.

Michael D. Plimier  
Name of Person Sending Facsimile

  
Signature